REMARKS

Claims 1-23 are pending. Claims 1 and 3 have been amended. Claims 21-23 have been added. The support for the amendment to claims 1 and 3 and the subject matter of claims 21 and 22 is found on page 8, line 20, through page 9, line 3. It is respectfully submitted that no new matter has been added.

Claims 1-20 appear to have been rejected under 35 U.S.C. 103(a) as being unpatentable over Saitoh, U.S. Patent No. 6,034,636, in view of Kocznar, U.S. Patent Publication Number 2002/0117543, further in view of Ito, U.S. Patent No. 6,229,485, and Bacon, U.S. Patent No. 5,317,293.

Saitoh discloses that it is an object of the present invention to "provide a small sized planar antenna which can achieve a wide usable frequency range" (col. 1, lines 43-45). Saitoh achieves this by changing the frequency of operation of the antenna structure as illustrated by Figure 1B. The switching of the frequencies is achieved by the use of a frequency switch terminal 107 (Figure 1A).

As Saitoh discloses a single antenna structure, there is no suggestion that such a structure could be utilized to overcome the problem Applicant's invention addresses, especially, improving the isolation between two antennas that exhibit "antenna shadowing" such that the second antenna can draw transmission power from the first antenna.

Saitoh is primarily interested in covering two frequency bands for reception/ transmission. Referring to column 3, lines 11-30, Saitoh indicates that the difference between the two resonant frequencies (illustrated in Fig. 1B) is determined by the distance Ld. The change in resonant frequency due to the use of frequency switch terminal 107 may be small (see Fig. 1b which clearly shows that Ld is small in comparison to La and Lb). Additionally, Saitoh outlines (col. 3, lines 25-29) "however as the distance Ld becomes larger, the radiation pattern of the antenna is deteriorated. Therefore, it is preferable that the distance Ld between the ground terminal 104 and the frequency switch terminal 107 is equal to or less than one third the circumference of the conductive plate 101."

One of ordinary skill in the art would appreciate that to improve isolation between two antenna structures "It should be appreciated that the coupling not only takes place when two different antennas are used in proximity to each other, but the mere existence of the second

antenna will draw some radio power. The radio power draw is stronger the closer the antennas are together and the closer their resonant frequencies." See page 2, lines 14-17 of Applicant's specification.

It is therefore preferable that the change in resonant frequency should be as large as possible to minimize coupling between two antennas. Saitoh teaches away from this as there is an upper limit on the change in resonant frequency provided, basically, because Saitoh does not address the problem described by Applicant. Saitoh is trying to provide a solution to a different problem.

Kocznar outlines an access control system using two RFID transponders. Kocznar discloses mutually exclusive operation of a first and a second antenna. Kocznar discloses "This control input S opens one of the switches 10, 11 while closing the other switch, so that always only one of the antennas A1, A2 is activated" (paragraph 0054).

While Kocznar discloses de-tuning, in Kocznar de-tuning is used to indicate deactivation of an antenna. Kocznar discloses "The parallel resonant circuit can also be de-tuned for the purpose of deactivating the antenna..." (paragraph 0056).

With reference to Figure 3, the antenna A1, A2 is deactivated/ de-tuned by using switches 10, 11, respectively. These switches effectively short circuit the antenna element L1, L2, respectively, so that no transmission/ reception is possible.

The antenna of Kocznar is very different from Applicant's claimed invention. For instance, Kocznar discloses a loop antenna L1, L2 (paragraphs 0048, 0050, 0056, and claim 1). By definition, a loop antenna has two ends but one is a feed and one is a short circuit, i.e., closed-end, unlike, for instance, Applicant's claim 10 which recites "... the second end being operable as an open end..."

Also, the de-tuning switch in Applicant's claim 10 is located between the feed point and the second end, whereas in Kocznar, de-tuning is performed at the feed point. "The bases of the antennas A1, A2 are connected to these electronic switches 10, 11 which can be activated via a control input..." (paragraph 0054). Furthermore, the radiating element of Kocznar does not have a feed point between the first end and the second end, as the feed point defines one of the ends of the loop antenna.

Additionally, the "shadowing" of energy between two antennas is not a primary concern

for RFID transponders, as they are used over very short ranges 1-10 m and the reduction in transmission power is therefore of no great concern. A person skilled in the art, who wanted to overcome the problem addressed by Applicant's application, would not therefore make reference to an application utilizing short-range non-cellular protocols.

Regarding Ito, the Patent Office's position is not understood. Ito does not disclose a switch. In antenna design, a characteristic impedance is dependent upon the feed point and other factors. It is therefore advantageous to place the feed point in a position where the characteristic impedance (e.g., 50 ohms) matches the impedance of the circuitry connected to it (i.e., the power supply system – preferably 50 ohms).

Ito is not an adaptive system. Ito discloses that the antenna and the connected circuitry should be impedance matched. Ito does not disclose many of the features of claim 10.

Bacon discloses preferable characteristics of a switch, such as low insertion loss. But, as Bacon simply shows a duplex switch, the significance of Bacon is not understood by Applicant.

Claim 1 recites "An antenna for a radio device, comprising a radiating body having a first end and a second end, the second end being operable as an open end; a feed point between the first end and the second end; and a detuning switch for grounding the radiating body at a particular point between the feed point and the second end such that the power draw caused by the antenna to other antennas is reduced, **the radiating body being disposed over a ground plane such that the first end overlies the ground plane and the second end does not overlie the ground plane.**"

None of the cited references disclose or suggest the claimed relationship of "**the antenna being disposed over a ground plane such that the first end overlies the ground plane and the second end does not overlie the ground plane.**" Thus, claims 1-9 are allowable for this additional reason.

Claims 21 and 22 recite the radiating body **is a substantially flat band that is substantially parallel to the ground plane and bent at the second end to provide an elongated radiator.** In claim 23, the first and second antennas are physically separate. None of the cited references appear to disclose or suggest this limitation. Thus, claims 21-23 are allowable for these additional reasons.

The Patent Office is respectfully requested to reconsider and remove the rejections of the

claims under 35 U.S.C. 103(a) based on Saitoh, Kocznar, Ito, and Bacon, and to allow all of the pending claims 1-23 as now presented for examination. An early notification of the allowability of claims1-23 is earnestly solicited.

Respectfully submitted:

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November 28, 2005 Debra Bryant

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